

## AN ALPINE BOTANICAL GARDEN

In a recent article published in the *Revue Philomathique de Bordeaux et du Sud-Ouest*, M. Henri Devaux describes most interestingly the Alpine Botanic Garden of the University of Lausanne. This Garden was founded a few years ago by Professor Wilczek at Pont-de-Nant which is situated at the entrance of the Canton du Vallais, some two hours' drive up from Bex at an altitude of 1,300 meters, surrounded by peaks and glaciers ranging from 2,500 to 2,900 meters. It is in a narrow valley protected from the east, west and north winds, but receives from the south the "Thalwind," a strong current of glacial air from the surrounding peaks, which united with the intense humidity combines to make climatic conditions favorable to the cultivation and growth of the vegetation of a much higher altitude and where such plants as *Campanula Cenisia* (2,600 m.), *Viola Cenisia* (2,000 m.), *Crepis pygmaca* (2,400 m.), and *Geum reptans* (2,500 m.) thrive. A small brook traverses the garden which with the intensely heavy dew of that high altitude is sufficient for the watering of the plants.

After many attempts Prof. Wilczek gave up the systematic arrangement of the classification of the plants growing in the Garden and resolved to form "*physiological associations*" resembling as closely as possible the biological and geographical groups found in nature. A *Salicetum* has been started; a collection of alpine willows with which have been planted those herbaceous plants that are grouped with them in a wild state. An alpine meadow brings together Gramineae, *Pedicularis*, and their associates. In a wood and along the brook have been cultivated such plants as *Lonicera*, *Ribes*, Maples, Ericaceae, *Rubus*, *Prenanthes*, *Dentaria*, *Lycopodium*, *Selaginella* and a multitude of ferns as well as various kinds of shade-loving Orchids, *Listera*, *Coral-larhiza*, *Goodyera* and others. Rock-loving plants are planted together in an artificial rock garden where natural conditions have been copied as nearly as possible and where *Saxifraga*, *Heldreichia*, *Crepis pygmaca*, *Viola Cenisia*, *Poa minor* and others of their kind flourish. On these groups of rock a very clear

demonstration is given of the influence of surroundings and exposure on plants. Each group has of course a sunny and shaded side, a dry and a humid surface; and a notable and striking distinction is established between the vegetation of the north and south side of the same hillside. On the south side with fullest exposure to the sun and drought are established the xerophilous plants, *Potentillas*, pinks, Geraniaceae, *Artemisia Pedemontana*, *Achillea argentea*, as well as most all of the labiates. On the north side are the hygrophylous plants, *Saxifrages*, *Rhododendron*, *Mimulus*, various *Silenes*, *Valeriana Celtica*, etc.

It is thus shown in these few notes that the garden is not only a collection of alpine plants but also of alpine conditions gathered into a small space and easily accessible for study. Not the least interesting and valuable collection and certainly a unique one in its way, is that of the mosses. The region is bryologically a remarkably rich one, and the project has been formed by the Director, Professor Wilczek, and the distinguished bryologist M. Jules Amann, to list the species of mosses growing on the rocks, which after numbering the rocks, will establish a catalogue of the mosses of the valley. On many of the boulders as many as forty species have been enumerated.

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### SHORTER NOTES.

TULIPA SYLVESTRIS IN THE FLORA OF THE UNITED STATES.—On May 6th, while driving along a thicket in a rich ravine near Sellersville, Pa., I discovered the *Tulipa sylvestris* L. growing in considerable abundance. Later it was found in the meadows a mile up the stream. Upon inquiry it was ascertained that it had been growing there for at least five years.

At the same time it was reported from Lansdale, Pa., a point ten miles from the first mentioned locality. Here it was found in a meadow, from which it had spread into an adjoining truck-patch, and thence into a wooded ravine.

It is thoroughly established in both localities, and should be included in the flora of the United States.—C. D. FRETZ, M.D.